WHAT IS CLAIMED IS:

1. A process for separation of the non-polar components of vegetable oil, the process comprising:

(a) preparing a vegetable oil sample for separation;

(b) introducing an aliquot of known mass of the vegetable oil sample into a pre-packed silica separation column of at least about 5 grams; and

(c) eluting the non-polar components of the aliquot with a solution comprising petroleum ether and diethyl ether having a petroleum ether:diethyl ether ratio from about 92:8 to about 82:18.

2. The process of Claim 1, wherein said pre-packed silica separation column is a 5 gram column.

3. The process of Claim 1, wherein said pre-packed silica separation column is a 10 gram column.

4. The process of Claim 1, wherein said petroleum ether:diethyl ether ratio is from about 91:9 to about 83:17.

5. The process of Claim 4, wherein said petroleum ether:diethyl ether ratio is from about 90:10 to about 84:16.

6. The process of Claim 5, wherein said petroleum ether:diethyl ether ratio is from about 89:11 to about 85:15.

7. The process of Claim 6, wherein said petroleum ether:diethyl ether ratio is from about 88:12 to about 86:14.

8. The process of Claim 7, wherein said petroleum ether:diethyl ether ratio is about 87:13.

9. The process of Claim 1, further comprising rinsing residual vegetable oil and/or crystallized fat residue after elution with petroleum ether, thereby separating residual non-polar components.

10. The process of Claim 9, wherein said crystallized fat is melted prior to said rinsing.

11. A process for calculating the amount of polar components in a vegetable oil, the process comprising:

(a) preparing a vegetable oil sample for separation;

(b) introducing an aliquot of known mass of the vegetable oil sample into a pre-packed silica separation column of at least about 5 grams;

(c) eluting the non-polar components of the aliquot with a solution comprising petroleum ether and diethyl ether having a petroleum ether:diethyl ether ratio of from about 92:8 to about 82:18;

(d) drying the eluted non-polar components to remove the solvent, thereby obtaining a mass of dried non-polar components; and

(e) calculating the amount of polar components in the aliquot.

12. The process of Claim 11, wherein said pre-packed silica separation column is a 5 gram column.

13. The process of Claim 11, wherein said pre-packed silica separation column is a 10 gram column.

14. The process of Claim 11, wherein said petroleum ether:diethyl ether ratio is from about 91:9 to about 83:17.

15. The process of Claim 14, wherein said petroleum ether:diethyl ether ratio is from about 90:10 to about 84:16.

16. The process of Claim 15, wherein said petroleum ether:diethyl ether ratio is from about 89:11 to about 85:15.

17. The process of Claim 16, wherein said petroleum ether:diethyl ether ratio is from about 88:12 to about 86:14.

18. The process of Claim 17, wherein said petroleum ether:diethyl ether ratio is about 87:13.

19. The process of Claim 11, wherein step (c) further comprises rinsing residual vegetable oil and/or crystallized fat residue after elution with petroleum ether, thereby separating residual non-polar components.

20. The process of Claim 19, wherein said crystallized fat is melted prior to said rinsing.

21. The process of Claim 11, wherein at step (e) said calculating comprises subtracting the mass of the dried non-polar components from the mass of the aliquot of vegetable oil sample.

22. The process of Claim 11 in which steps (c), (d), and (e) comprise the following:

(c) eluting the polar components of the aliquot with diethyl ether;

(d) drying the eluted polar components to remove the diethyl ether; and

(e) calculating the amount of non-polar components in the aliquot.